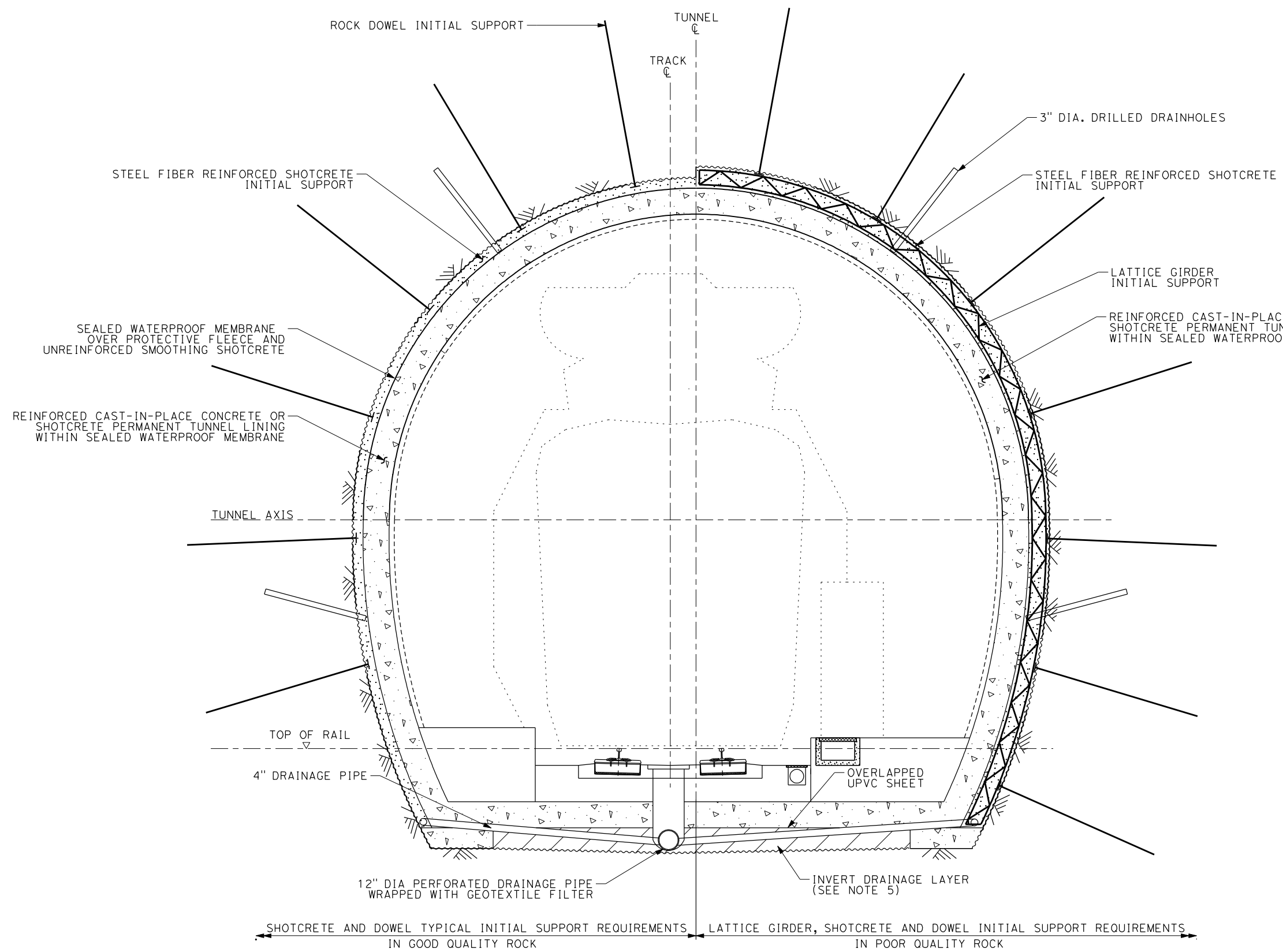


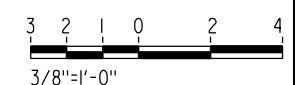
7/2/2010 2:44:40 PM T:\13259B Calif High Speed Rail\CADD\Directive Drawings\2.4.5 - Tunnel Structure Design\Working\2.4.5-A.dgn



NOTES:

1. FOR TUNNEL INTERNAL DIMENSIONS AND REQUIRED FREE TUNNEL CROSS SECTIONAL AREAS SEE TM 2.4.2 BASIC TUNNEL CONFIGURATIONS.
2. INITIAL SUPPORT AND PERMANENT STRUCTURAL ELEMENTS ARE NOT DESIGNED.
3. TUNNEL SHAPE IS INDICATIVE ONLY.
4. TYPICAL CROSS SECTION FOR DRAINED, MINED, ROCK TUNNELS ONLY. NOT SUITABLE FOR BORED OR UN-DRAINED ROCK TUNNELS AND SOFTGROUND TUNNELS.
5. DRAINAGE LAYER TO BE POROUS CONCRETE OR APPROVED. NO FINES, CLEAN CRUSHED ROCK.
6. EXCAVATED FACE SUPPORT REQUIREMENTS NOT SHOWN.
7. EXCAVATION SEQUENCE AND NUMBER OF HEADINGS NOT SHOWN.
8. IMMEDIATE INSTALLATION OF INITIAL SUPPORT IS CRITICAL TO STABILITY AND SAFETY IN POOR QUALITY ROCK.

TYPICAL CROSS SECTION - DRAINED ROCK TUNNEL



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
D. McALLISTER
DRAWN BY
D. SOLTERO
CHECKED BY
J. THOMPSON
IN CHARGE
J. CHIRCO
DATE
06/30/10



CALIFORNIA HIGH-SPEED TRAIN PROJECT

HIGH-SPEED TRAIN TUNNEL STRUCTURES
SINGLE TRACK MINED ROCK TUNNEL
TYPICAL CROSS SECTION (DRAINED)

CONTRACT NO.
13259
DRAWING NO.
TM 2.4.5-A
SCALE
AS SHOWN
SHEET NO.